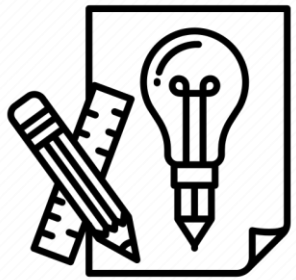
GCSE (1-9)

Design and Technology

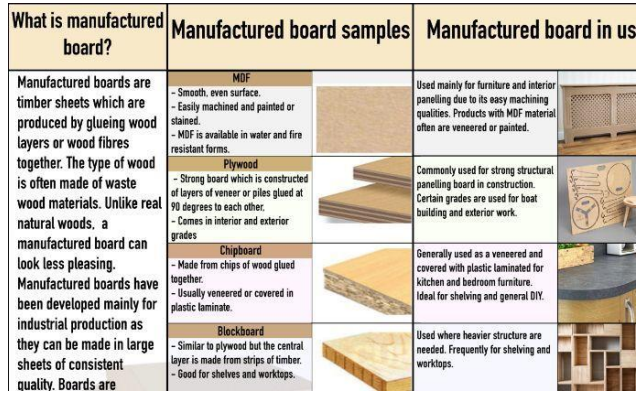
"How to find and develop creative solutions that work and solve everyday problems"

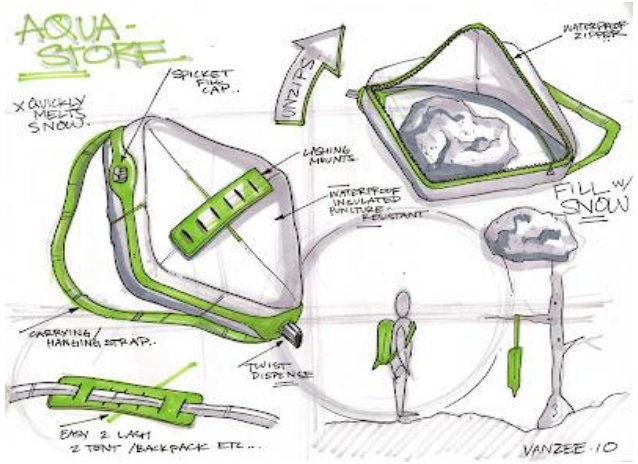


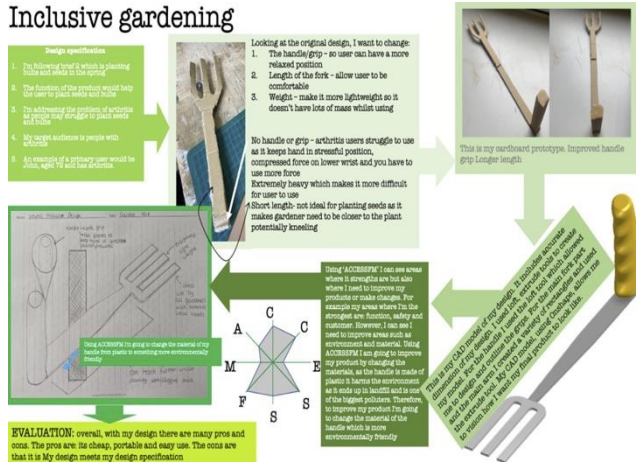
Creating

Are you interested in?

- Problem Solving
- Understanding end user needs
- Developing Ideas and designs through iteration
- Modelling and making working prototypes
- Understanding how things work
- Materials and their properties
- Manufacturing processes







GCSE (1-9)

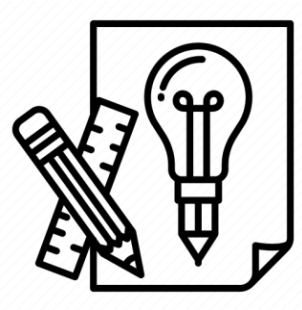
Design and Technology

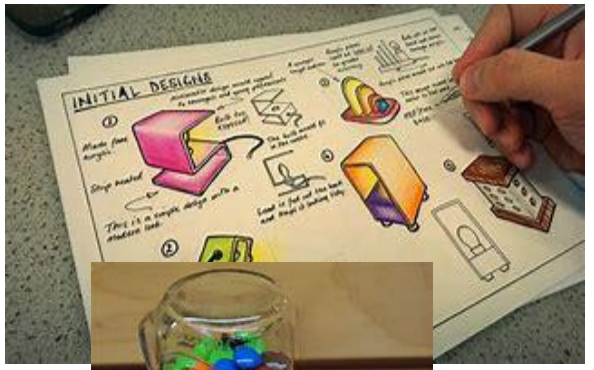
In Design and Technology, you'll cover:

- Real world awareness of iterative design practices and strategies used by the creative designers to develop new products

- Use critical thinking and creativity towards inventive and innovative design solutions that answer real problems

- Understanding materials and manufacturing processes THEORY to ensure designs can be made and will work in real world applications



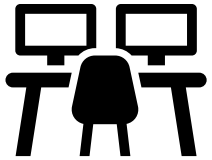


Creating

How will you be assessed?

- Principles of Design and Technology – **written paper 50%**
  - *Exploring which materials (e.g. plastics/woods/metals) are used to make products and why?*
  - *Exploring which processes (sand casting, CAD, welding) are used to make products and why?*
  - *2 Hour Exam **(yr11)***

- Iterative Design Challenge – **NEA Course Work 50%**
  - *Portfolio containing research, designing, modelling, testing and an evaluation. PLUS, your practical piece of work (Wood, Metal, Plastic)* ***(Yr11)***

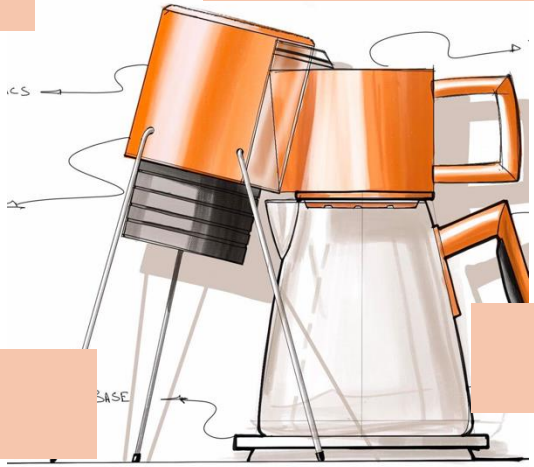


Design and Technology can take you places!

Product Designer

Model Maker

Architect



Toy Designer

Graphic Designer

Set Designer

Project Manager

Product Development

Design Engineer

Cambridge National Level 1 / level 2

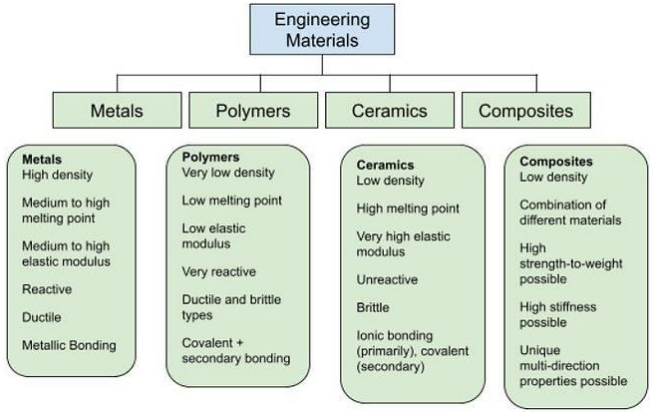
Engineering Manufacture

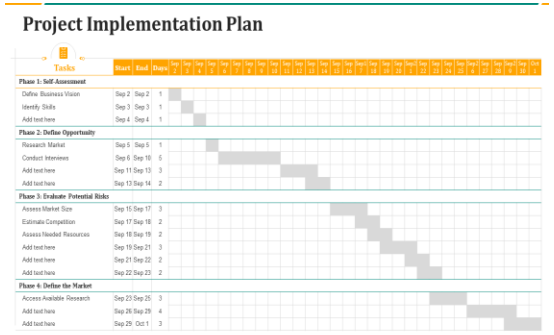
"How to read an engineering drawing and take a product through the manufacturing processes"

Manufacturing

Are you interested in?

- Planning manufacturing processes to make a product
- Reading and understanding engineering drawings
- Understanding the THEORY behind materials and processes to manufacture products
- Learning about manufacturing theories like Lean Manufacturing, CAD CAM and Scales of Production
- Creating programmes for CNC machining





Cambridge National Level 1 / level 2

Engineering Manufacture

In Engineering Manufacture, you'll cover:

- The THEORY behind different types of manufacturing processes, the materials that can be used and what other factors need to be considered
- Selecting and safely using equipment
- Planning and manufacturing a one-off product using hand tools and manual machines
- Planning and manufacturing in large quantities, using software computer-controlled machinery

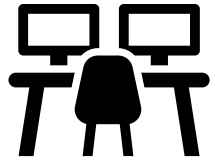
Manufacturing

How will you be assessed?

- Principles Engineering Manufacture – **written paper** **40%**

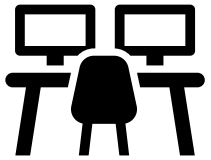
  - *Materials and properties used in engineering*
  - *Manufacturing processes in engineering*
  - *Engineering requirements – quality control and planning, scales of production (Yr11)*

- Manufacturing a one-off product – **NEA Course Work** **30%**



  - *Planning and making a product from a given engineering drawing*
  - *Using tools and machines safely (Yr10)*

- Manufacturing in quantity – **NEA Course Work** **30%**



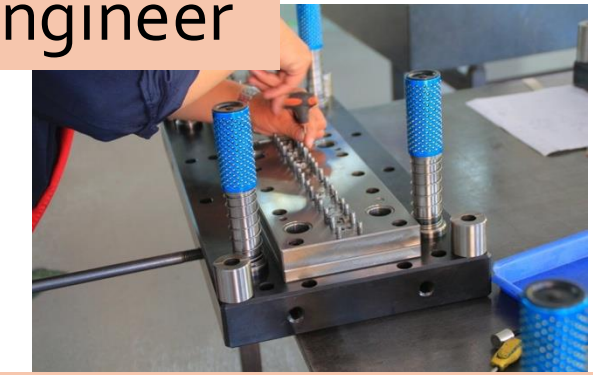
  - *Creating CAD and digital files from a given engineering drawing*
  - *Setting and operating a CNC machine using correct parameters (Yr11)*

Engineering Manufacture can take you places!

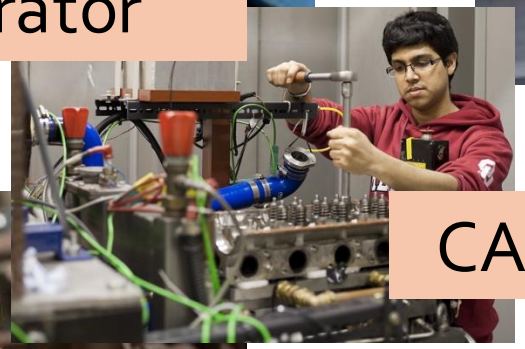
Project Manager

Machine Operator

Quality Engineer



Tool Maker



Tool Setter

CAD Operator

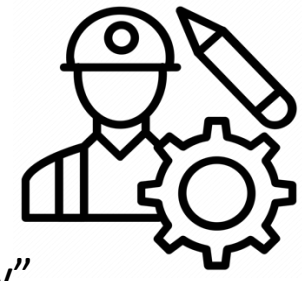
CNC Machinist

Production Planning

Maintenance Engineer

Cambridge National Level 1 / level 2

Engineering Design

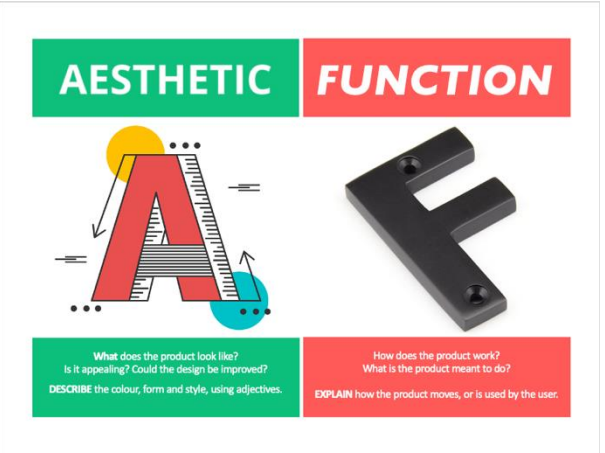


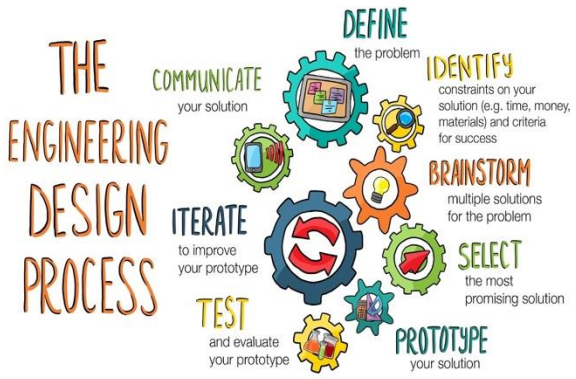
"How to analyse and explain how a product is made and what makes it successful, then present this in the most appropriate way"

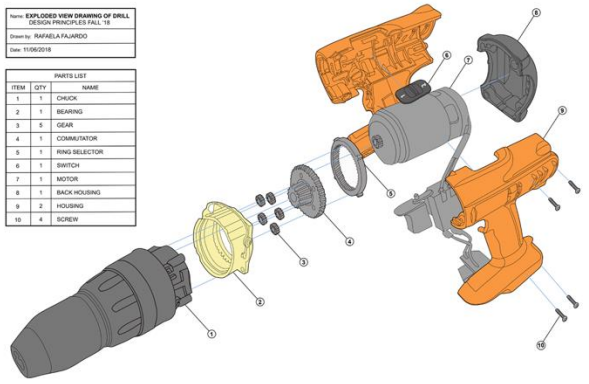
Analysing

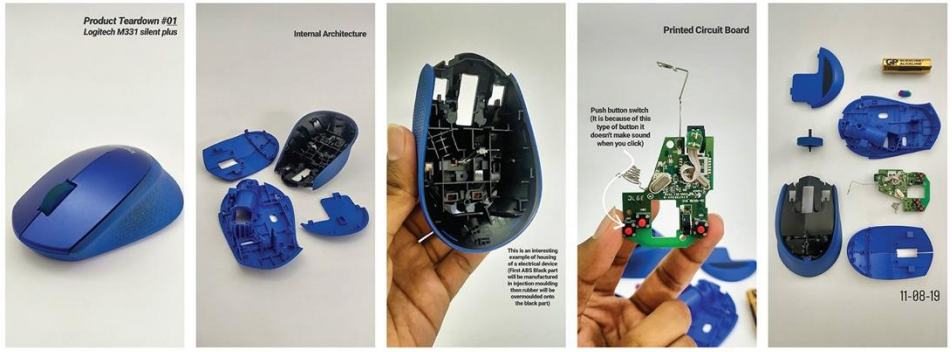
Are you interested in?

- Drawing and sketching products and designs
- Taking things apart to understand how they work
- Presenting designs and ideas on paper, CAD and modelling
- The design lifecycle and sustainability
- Understanding how things are made and the materials they are made from
- Evaluating how successful a product is







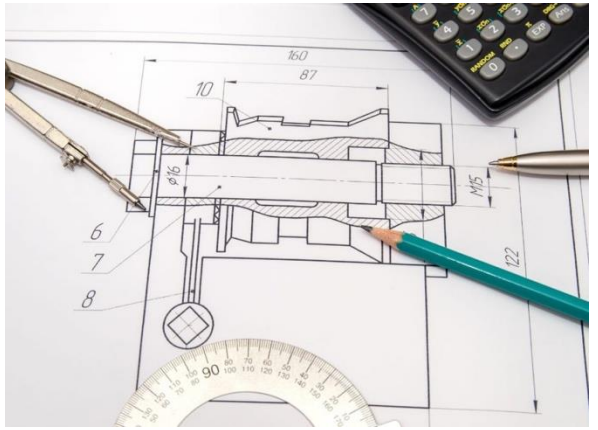


Cambridge National Level 1 / level 2

Engineering Design

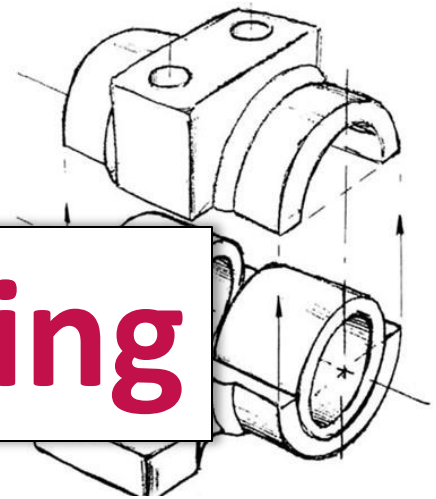
In Engineering Design, you'll cover:

- Analysing how designs are developed – including what information is needed and how manufacturing influences design



- Communicating designs using sketches, drawings and computer aided design (CAD), producing accurate and detailed drawings and models

- How designers create and test models and working prototypes – making high quality models to represent design ideas.

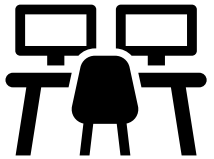


Analysing

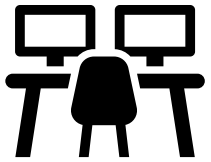
How will you be assessed?

- Principles Engineering Design – **written paper** **40%**
  - *Design processes – Iterative, Linear and Sustainable*
  - *Design requirements and presenting design outcomes*
  - *Evaluating design ideas (Yr11)*

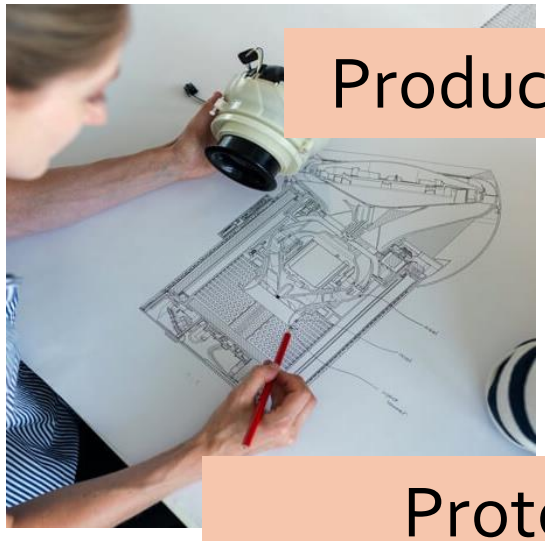
- Communicating Designs – **NEA Course Work** **30%**
  - *Developing design ideas and presenting these in relevant and professional formats (Yr10)*



- Design Evaluation & Modelling – **NEA Course Work** **30%**
  - *Analysis of an existing product and understanding how they are made, what they are made from and how successful they are (Yr11)*

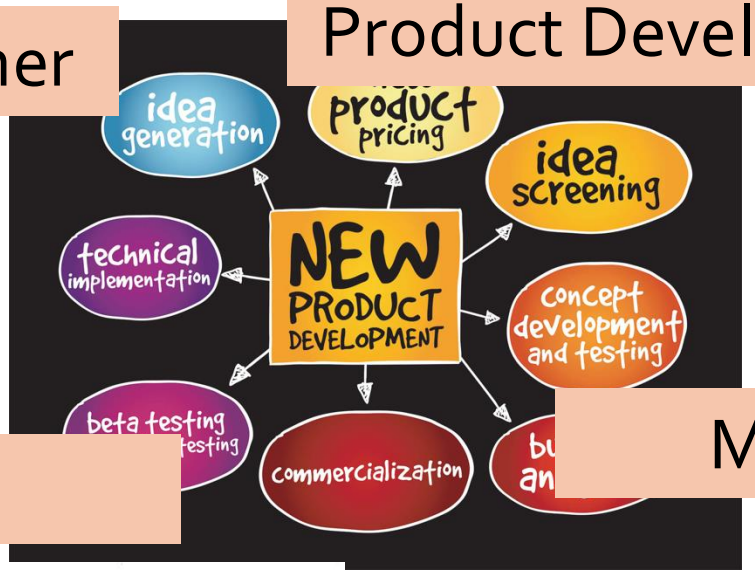


Engineering Design can take you places!



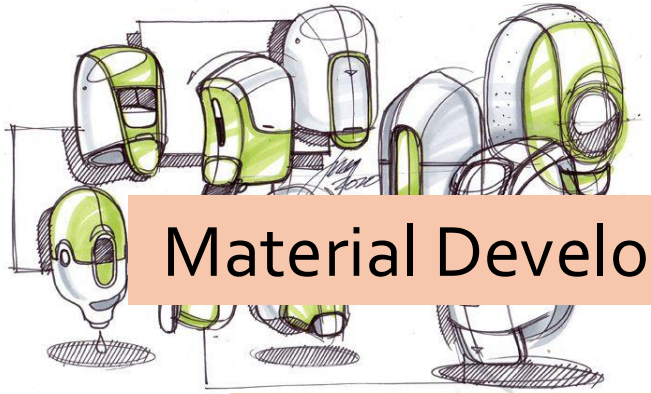
Product Designer

Product Development



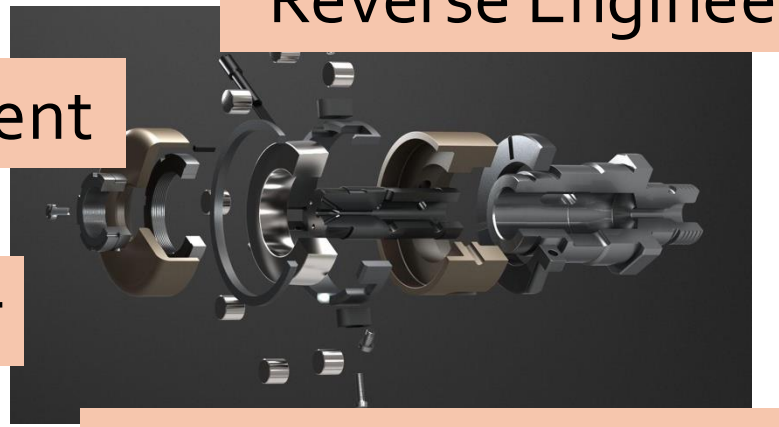
Market Analyst

Prototyping



Material Development

Reverse Engineering



Project Engineer

Concept Artist

Design Engineer

Level 2 Vocational Award

Hospitality and Catering

"Understanding the world of hospitality from cooking great meals to managing hotels and restaurants"


WEST OF ENGLAND
Meet the Moment Makers...
VisitWest

Are you interested in?

- Planning and creating food in the kitchen
- What it takes to work in a top hotel or restaurant
- Discovering new flavours in the kitchen that inspire you
- Developing the skills you need to work front of house
- Nutritional food and how cooking methods impact the nutritional value

Level 2 Vocational Award

Hospitality and Catering

In Hospitality and Catering, you'll cover:

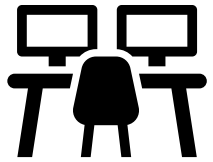
- Learn about the hospitality and catering industry, the types of hospitality and catering providers and about working in the industry.

- Learn about health and safety, and food safety in hospitality and catering.

- Learn how to plan nutritious menus as well as factors which affect menu planning. You will learn the skills and techniques needed to prepare, cook and present dishes.

How will you be assessed?

- Hospitality and Catering in action – **NEA Course Work 60%**
  - *Nutrition and how cooking methods impact nutritional value*
  - *Planning nutritious menus and meals*
  - *Practical cooking skills*
  - *Presentation and serving of prepared food (Yr10)*



- The Hospitality and Catering industry – **written paper 40%**
  - *Types of Hospitality and Catering businesses*
  - *Health and safety in Hospitality and Catering*
  - *Rules, regulations and the working environment*
  - *Food safety (Yr11)*

Hospitality and Catering can take you places!

Marketing

Hotel Management

Chef

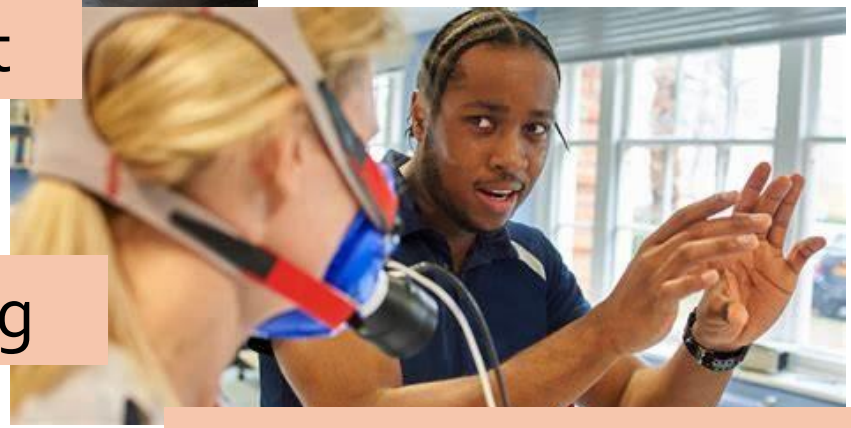
Environmental Health

Nutritionist

Personal Trainer

Journalism

Event planning



Sports Science